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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,995	02/12/2004	David Malcolm Camm	SMARB11.001AUS	3328

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EXAMINER

WON, BUMSUK

ART UNIT	PAPER NUMBER
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2889

NOTIFICATION DATE	DELIVERY MODE
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04/08/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/777,995	Applicant(s) CAMM ET AL.	
	Examiner Bumsuk Won	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-131 is/are pending in the application.
- 4a) Of the above claim(s) 76-114 and 117-131 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-62, 66-75, 115 and 116 is/are rejected.
- 7) ☒ Claim(s) 63-65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/4/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/4/2008 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 55-75, 115, and 116 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 55, 56, 115, and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by Fein (US 4,877,997).

Regarding claim 55, Fein discloses an apparatus (figure 2) comprising: an electrically insulated flow generator (not referenced, column 4, lines 21-31, “water

69 is pumped through inlet 68,” and 67 is made of Kovar jacket which is electrically insulation material) configured to generate a flow of liquid along an inside surface of an envelope (column 4, lines 21-31, the examiner interprets 67 being the envelope); and first and second electrodes (57 and 59) configured to generate an electrical arc within the envelope to produce electromagnetic radiation (this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Regarding claim 56, Fein discloses the envelope (67) is made of an electrically insulation material (column 4, lines 21-31) and an inner envelope (33) is made of an electrically insulation material (column 3, line 54-55), and the envelope and the inner envelope surrounds the flow generator.

Regarding claim 115, Fein discloses an apparatus (figure 2) comprising: electrically insulated means (not referenced, column 4, lines 21-31, “water 69 is pumped through inlet 68,” and 67 is made of Kovar jacket which is electrically insulation material) for generating a flow of liquid along an inside surface of an envelope (67); and means for generating an electrical arc within the envelope to produce the electromagnetic radiation (57 and 59 denotes electrodes, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Regarding claim 116, Fein discloses a method of producing electromagnetic radiation (figure 2), the method comprising: generating a flow of liquid along an inside surface of an envelope (67), using an electrically insulated flow generator (not referenced, column 4, lines 21-31, “water 69 is pumped through inlet 68,” and 67 is made of Kovar jacket which is electrically insulation material); and generating an electrical arc between first and second electrodes to produce the electromagnetic radiation (57 and 59 denotes electrodes, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Claims 55, 56, 58, 60-62, 66, 71, 115, and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by Grossman (US 4,963,783).

Regarding claim 55, Grossman discloses an apparatus (figure 1) comprising: an electrically insulated flow generator (column 4, lines 24-29 and 52-56) configured to generate a flow of liquid along an inside surface of an envelope (column 4, lines 52-56, the examiner interprets 3 being the envelope, and 2 being an inner envelope); and first and second electrodes (6's) configured to generate an electrical arc within the envelope to produce electromagnetic radiation (this apparatus is a lamp, therefore the electrodes create electromagnetic radiation - light).

Regarding claim 56, Grossman discloses both the envelope (3) and the inner envelope (2) is made of an electrically insulation material (column 4, lines 24-29), and the envelope and the inner envelope surrounds the flow generator.

Regarding claim 58, Grossman discloses the electrical insulation surrounds the first electrode – cathode and electrical connection thereto (figure 1 shows the insulations 2 and 3 surrounds the electrode and the electrical connection 5).

Regarding claim 60, Grossman discloses the electrical insulation (3) surround the flow generator comprises the envelope (3).

Regarding claim 61, Grossman discloses the electrical insulation (3) surrounding the flow generator comprises an insulative housing (3).

Regarding claim 62, Grossman discloses the insulative housing (3) surrounds at least a portion of the envelope (3).

Regarding claim 66, Grossman discloses the envelope comprises a transparent cylindrical tube (figure 1, column 4, lines 24-39).

Regarding claim 71, Grossman discloses the tube comprises quartz (figure 1, column 4, lines 24-39).

Regarding claim 115, Grossman discloses an apparatus (figure 1) comprising: electrically insulated means (column 4, lines 24-29 and 52-56) for generating a flow of liquid along an inside surface of an envelope (3); and means

for generating an electrical arc within the envelope to produce the electromagnetic radiation (6's denotes electrodes, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Regarding claim 116, Grossman discloses a method of producing electromagnetic radiation (figure 1), the method comprising: generating a flow of liquid along an inside surface of an envelope (3), using an electrically insulated flow generator (column 4, lines 24-29 and 52-56); and generating an electrical arc between first and second electrodes to produce the electromagnetic radiation (6's denotes electrodes, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Claims 55, 115, and 116 are rejected under 35 U.S.C. 102(b) as being anticipated by Carmichael (US 5,504,666).

Regarding claim 55, Carmichael discloses an apparatus (figures 1-4) comprising: an electrically insulated flow generator (10) configured to generate a flow of liquid along an inside surface of an envelope (figure 4, the examiner interprets 10 being the envelope, and 16 being an inner envelope); and first and second electrodes (not referenced) configured to generate an electrical arc within the envelope to produce electromagnetic radiation (this apparatus is a lamp, therefore the electrodes create electromagnetic radiation - light).

Regarding claim 115, Grossman discloses an apparatus (figures 1-4) comprising: electrically insulated means (10 and figure 4) for generating a flow of liquid along an inside surface of an envelope (10); and means for generating an electrical arc within the envelope to produce the electromagnetic radiation (the electrodes are not referenced, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Regarding claim 116, Grossman discloses a method of producing electromagnetic radiation (figures 1-4), the method comprising: generating a flow of liquid along an inside surface of an envelope (10), using an electrically insulated flow generator (figure 4); and generating an electrical arc between first and second electrodes to produce the electromagnetic radiation (the electrodes are not referenced, and this apparatus is a discharge lamp, therefore the electrodes create electromagnetic radiation).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 57, 59, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman in view of Nodwell (US 4,027,185). Regarding claim 57, Grossman discloses all the claim limitation except for the flow generator having a conductor.

Nodwell discloses an apparatus having a flow generator with a conductor (column 4, lines 16-64), for the purpose of efficiently generating the flow of liquid.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the flow generator include a conductor as disclosed by Nodwell in the apparatus disclosed by Grossman, for the purpose of efficiently generating the flow of liquid.

Regarding claim 59, Nodwell discloses the electrical connection (25) comprises flow generator (27). The reason for combining is same as claim 57.

Regarding claim 75, Grossman discloses all the claim limitation except for the insulative housing comprising at least one of a plastic or a ceramic.

Nodwell discloses an apparatus having an insulative housing comprises ceramic (column 4, lines 5-15), for the purpose of reducing manufacturing cost.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an insulative housing comprises ceramic

as disclosed by Nodwell in the apparatus disclosed by Grossman, for the purpose of reducing manufacturing cost.

Claims 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman in view of Schenck (US 5,753,106).

Regarding claims 67 and 68, Grossman discloses all the claim limitation except for the thickness of the tube.

Schenck discloses an apparatus (figure 1) having for radiation having cylindrical tube (2) made of quartz having a wall thickness of 5 to 100 mm (column 13, lines 37-64), for the purpose of preventing from overheating (column 13, lines 37-64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a thickness of a tube being 5 to 100 nm disclosed by Schenck in the apparatus disclosed by Grossman, for the purpose of preventing from overheating.

Claims 69 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman.

Regarding claims 69 and 70, Grossman discloses all the claim limitation except for the tube being a precision bore cylindrical tube with a dimensional tolerance lower than 5×10^{-2} mm.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the tube with a precision bore cylindrical tube with a dimensional tolerance lower than 5×10^{-2} mm in the apparatus disclosed by Grossman, for the purpose of reducing unevenness of the inside diameter of the tube to enhance sealing of the housing and envelope.

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman in view of Parfeniuk (US 6,621,199).

Regarding claim 72, Grossman discloses all the claim limitation except for the quartz tube being a pure quartz tube.

Parfenik discloses an apparatus (figures 1) having a tube comprising pure quartz (column 4, lines 42-58), for the purpose of enhancing light emissivity.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have pure quartz tube as disclosed by Parkenik in the apparatus disclosed by Grossman, for the purpose of enhancing light emissivity.

Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman in view of Ashely (5,137,659).

Regarding claim 73, Grossman discloses all the claim limitation except for the tube is cerium doped.

Ashely discloses an apparatus in an analogous art using cerium in an housing for radiation emitting device (col 8, lines 16-21), for the purpose of enhancing transparency (col 8, lines 16-21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have cerium disclosed by Ashely in the apparatus disclosed by Grossman, for the purpose of enhancing transparency.

Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grossman in view of Kimble (6,465,799).

Regarding claim 74, Grossman discloses all the claim limitation except for the tube is sapphire.

Kimble discloses an apparatus in an analogous art using sapphire in an housing for radiation emitting device (col 6, lines 11-46), for the purpose of enhancing transparency.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have sapphire disclosed by Kimble in the apparatus disclosed by Grossman, for the purpose of enhancing transparency.

Allowable Subject Matter

Claims 63-65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 63, the prior art of record does not teach or suggest the invention of an apparatus for producing electromagnetic radiation having an electrical insulation comprises gas in a space between an insulative housing and a portion of an envelope, along with other claimed limitations. Claims 64 and 65 are objected to due to claim dependency.

Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bumsuk Won whose telephone number is 571-272-2713. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on 571-272-2303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bumsuk Won/
Examiner, Art Unit 2889

/TOAN TON/
Supervisory Patent Examiner
Art Unit 2889